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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/328,391	06/09/1999	VINCENT BERGER	0154-2811-2	6762
22850	7590	04/20/2004	EXAMINER	
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			BROCK II, PAUL E	
			ART UNIT	PAPER NUMBER

2815

DATE MAILED: 04/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Advisory Action**

Application No.

09/328,391

Applicant(s)

BERGER ET AL.

Examiner

Paul E Brock II

Art Unit

2815

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 31 March 2004 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE. Therefore, further action by the applicant is required to avoid abandonment of this application. A proper reply to a final rejection under 37 CFR 1.113 may only be either: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114.

**PERIOD FOR REPLY** [check either a) or b)]

- a) ☐ The period for reply expires \_\_\_\_\_ months from the mailing date of the final rejection.
- b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection. ONLY CHECK THIS BOX WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

1. ☐ A Notice of Appeal was filed on \_\_\_\_\_. Appellant's Brief must be filed within the period set forth in 37 CFR 1.192(a), or any extension thereof (37 CFR 1.191(d)), to avoid dismissal of the appeal.
2. ☐ The proposed amendment(s) will not be entered because:
- (a) ☐ they raise new issues that would require further consideration and/or search (see NOTE below);
  - (b) ☐ they raise the issue of new matter (see Note below);
  - (c) ☐ they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
  - (d) ☐ they present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: \_\_\_\_\_

3. ☐ Applicant's reply has overcome the following rejection(s): \_\_\_\_\_.
4. ☐ Newly proposed or amended claim(s) \_\_\_\_\_ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
5. ☒ The a) ☐ affidavit, b) ☐ exhibit, or c) ☒ request for reconsideration has been considered but does NOT place the application in condition for allowance because: See Continuation Sheet.
6. ☐ The affidavit or exhibit will NOT be considered because it is not directed SOLELY to issues which were newly raised by the Examiner in the final rejection.
7. ☒ For purposes of Appeal, the proposed amendment(s) a) ☐ will not be entered or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

The status of the claim(s) is (or will be) as follows:

Claim(s) allowed: \_\_\_\_\_

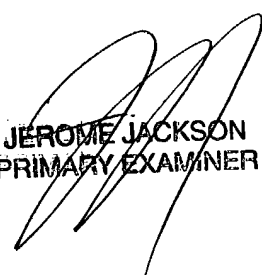
Claim(s) objected to: \_\_\_\_\_

Claim(s) rejected: 1-3, 6, 11-15, 18, 23 and 24.Claim(s) withdrawn from consideration: 4, 5, 7-10, 16, 17 and 19-22.

8. ☐ The drawing correction filed on \_\_\_\_\_ is a) ☐ approved or b) ☐ disapproved by the Examiner.
9. ☐ Note the attached Information Disclosure Statement(s) (PTO-1449) Paper No(s). \_\_\_\_\_
10. ☐ Other: \_\_\_\_\_

Continuation of 5. does NOT place the application in condition for allowance because: With regard to applicant's argument that the "outstanding Office Action merely states that 'it would have been obvious' for one of ordinary skill in the art to combine the two references, but provides no motivation or suggestion for supporting that statement" it should be noted that the final office action states for a motivation "it would have been obvious... in order to establish an electron accelerating electric field within the barrier layer as stated by Katoh in column 3, lines 37 - 48." Applicant has not argued that this motivation fails. Therefore, applicant's argument is not persuasive, and the rejection is proper.

With regard to applicant's argument that "it is respectfully submitted that a concentration of either P or As in Katoh has a constant value for a given parameter J. Accordingly, the combination of Katoh and Rosencher does not teach or suggest a transfer barrier layer that includes a component having a concentration that varies linearly, decreasing in a direction from a quantum well to an electron storage layer," upon further reading of Katoh, it is again determined that the parameter J does indeed vary linearly. Thus, the transfer barrier layer includes a component (P) having a concentration that varies linearly, decreasing in a direction from a quantum well to an electron storage layer. As depicted in figures 3 and 4 of Katoh, and column 3, line 60 - column 4 the term "composition grading" is a further clear indication that J is varying throughout the barrier layer. Therefore, applicant's arguments are not persuasive, and the rejection is proper. With regard to applicant's argument that "Rosencher and Katoh are silent whether the materials used in their devices have a metastable level," it should be noted that because having a metastable level is a physical property of the material, Rosencher and Katoh do not have to specify if the material has a metastable property. In this case Rosencher and Katoh clearly disclose III-V semiconductor materials that have the physical property of a metastable level. Whether or not this metastable property is used during operation of the device is specifying how the layer is intended to be used. Applicant has not pointed out specifically which II-V semiconductor materials in Rosencher and Katoh do not have a metastable level. Therefore, applicant's arguments are not persuasive, and the rejection is proper.

  
JEROME JACKSON  
PRIMARY EXAMINER